

# **8/16-port PS2 KVM Switch**

## **User Manual**

Rev. 1.0

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## **1. Product introduction:**

This PS2 KVM (Keyboard, Video and Mouse) Switch allows multiple computers (PCs or servers) controlled by one set of keyboard, monitor and mouse. It ensures easy switch by front panel button, Hot-keys or the friendly On Screen Display (OSD) menu with connection up to 128 computers (by chaining 16-port PS2 KVMs). Not only naming for each computer can be done for easy identification, it also protects access by passwords. Additionally with the Auto Scan function it helps you managing all connecting systems at ease.

### ■ Why use a PS2 KVM Switch?

- Saves money, time, spaces and energy
- 1. Saves money – With only one set of keyboard, monitor and mouse you can manage multiple systems. This greatly reduces the cost of implementing hardware for each computer and system administrator to handle the installation.
- 2. Saves time – Completely centralized control to save your time traveling between every computer.
- 3. Saves space – As only one set of keyboard, monitor and mouse is required to manage all computers, no need to worry about extra spaces for each system. You may utilize the space for future use.
- 4. Saves energy – As number of keyboard, monitor and mouse is greatly reduced, the electricity burden caused by each hardware is also reduced..

### ■ Who should use the PS2 KVM?

Anyone who owns two or more computers, who wishes to reduce cost and control her system efficiently, PS2 KVM can be the best solution. Following list is some of the example where PS2 KVM can be implemented.

- 1. SOHO, small to medium offices
- 2. Organization's server management centre
- 3. Hardware/software experiment and system coalition
- 4. PC production quality test
- 5. Industrial rack application
- 6. Customer's service centre
- 7. ISP (Internet Service Provider), ASP (Application Service Provider), IDC(Internet Data Center).. etc. Global information system centre.

## **2. Product Feature**

- Software free, easy installation, fully plug-and-play design.
- Compatible with typical PS/2 computers, monitors and keyboards. Supports IntelliMouse, IntelliMouse Explorer, and Logitech Net Mouse... etc.
- Compatible using DOS, Win3.x, Win95/98/98SE/2000/ME/XP/Vista, WinNT, Netware, HP Unix, Linux...etc.
- If keyboard or mouse is using USB interface, please implement USB to PS2 converter.
- Supports Hot plug-and-play (if computer and operation system also supports this feature)
- Supports high resolution video at 1920 x 1440, with DDC2 monitor compatibility.
- Auto Scan function scans for all connecting computer at intervals between 5~255 seconds.
- Use power adaptor to provide electricity.
- Front panel channel selection button and indication lights.
- By daisy-chaining it can connect up to 64 computers (for all 8-port PS2 KVM connection) or 128 computers (for all 16-port PS2 KVM connection)
- Separate naming for each computer for easy identification.
- Provide password protection and operation level restriction.
- 19" rack mount kit for easy rack installation
- Has CE, FCC and C-Tick Certifications
- Exclusive port for daisy-chain connection
- Firmware upgrade facility through RS-232 interface
- Dual power input- When primary power connection fails, secondary power automatically initiates to prevent unwanted device shutdown.

### 3. Specifications

Model No.	8PORT KVM	16PORT KVM
Computer port	8	16
Console Port	1	1
Firmware Upgrade Port	1	1
Daisy Chain Port	1	1
Computer Port Connector (All Female Type)	PS/2 Keyboard mini Din 6-pin PS/2 Mouse Mini Din 6-pin Monitor VGA HDDB 15-pin	
Console Port Connector (All Female Type)	PS/2 Keyboard mini Din 6-pin PS/2 Mouse Mini Din 6-pin Monitor VGA HDDB 15-pin	
Firmware Upgrade Port Connector (Male type)	RS-232 DB 9-pin	
Daisy Chain Port (All Female Type)	PS/2 Keyboard Mini Din 6-pin PS/2 Mouse Mini Din 6-pin Monitor VGA HDDB 15-pin	
PC Port Select Method	Hot-Key Push Button OSD Menu	
Port indication	3 digits One digit indicates Bank Two digits indicates active computer ports	
Computer port LED	Online indication and Power on indication for each computer port.	
SCAN LED	1	

OSD Menu	Yes	
Auto Scan Interval	5 ~ 255 seconds	
Keyboard Emulation	PS2	
Mouse Emulation	PS2	
Firmware Upgrade Port	RS-232	
Monitor resolution	1920X1440 /60Hz	
DDC version	DDC2	
Daisy Chain MAX Level	8 levels maximum	
Maximum connected computers	120	128
Housing	Metal 19" 1RU (Rack Mount Unit)	Metal 19" 1RU (Rack Mount Unit)
Power adaptor	Dual Power Input) DC 5V/1A *1 DC5V/1A* 1 (Redundancy)	
Operating Temperature	0~50°C	
Storage Temperature	-20 ~ 60°C	
Weight (gram)		
Size (mm)	(420)X(130)X(44)	(420)X(130)X(44)

## 4. Hardware Installation

Prior to installation please switch off all computer and peripherals. Following guide is using 8-port PS2 KVM as example. Please note 16-port PS2 KVM has similar hardware installation.

### Step 1

Please open the package carefully and take out all required accessories to prepare fluent installation. The size of device is 19". For installation on rack please install the rack-mount kit. Please measure the suitable distance between PS2 KVM and computer, keyboard, monitor and mouse before installation.

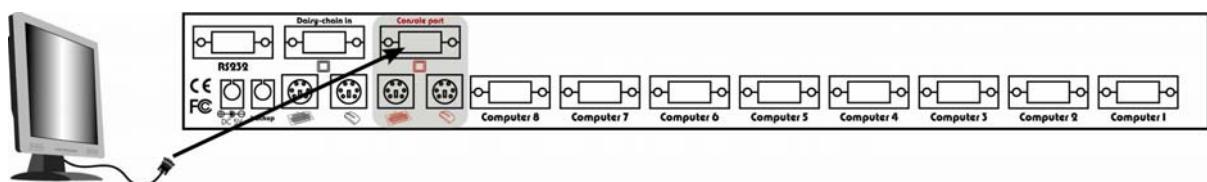


### Step 2

Plug power adaptor into PS2 KVM and power socket. You will hear one beep and port-1 red LED lids

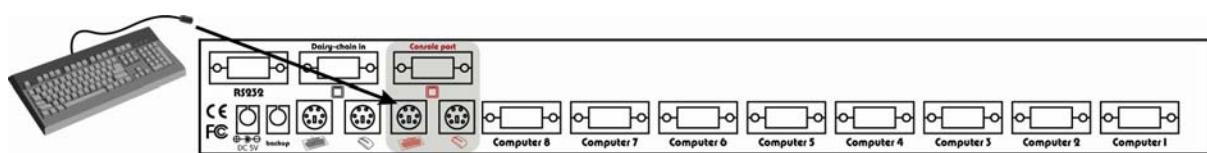
### Step 3

Please connect HDDB 15-pin blue connector on monitor to console port on PS2 KVM as illustrated below:



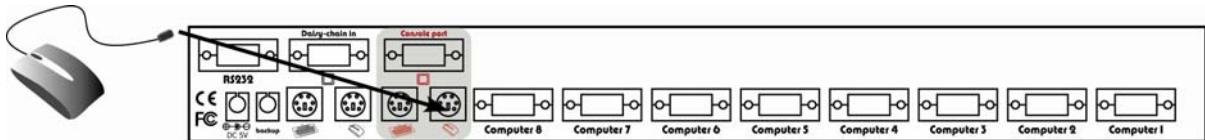
### Step 4

Please connect PS2 Mini Din 6-pins purple connector on keyboard to console port on PS2 KVM as illustrated below:



### Step 5

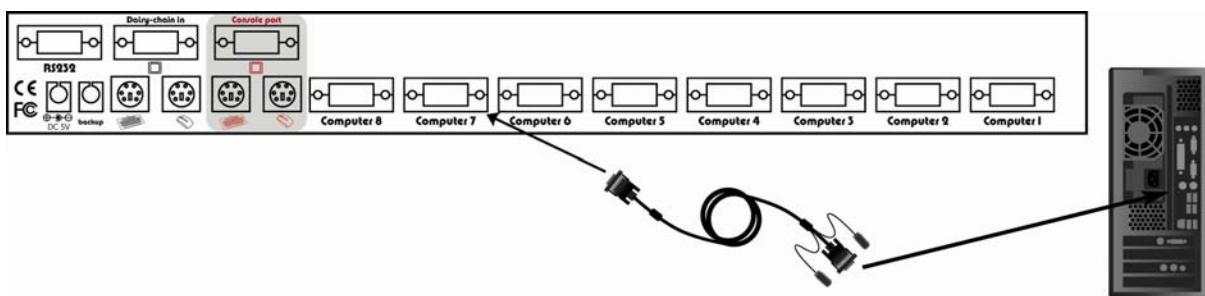
Please connect PS2 Mini Din 6-pins green connector on mouse to console port on PS2 KVM as illustrated below:



## Step 6

Please use KVM cable to connect computer and PS2 KVM. Plug the end with only one HDDB 15-pin to PS2 KVM computer port, and the other end of the cable with HDDB 15-pin and two PS2 Mini Din 6-pin to back of computer. Please use the above method to connect every computer to PS2 KVM.

★ NOTE : One end of this cable only has one HDDB 15-pin connector, the other end has three connectors- one HDDB 15-pin and two PS2 Mini Din 6-pin.



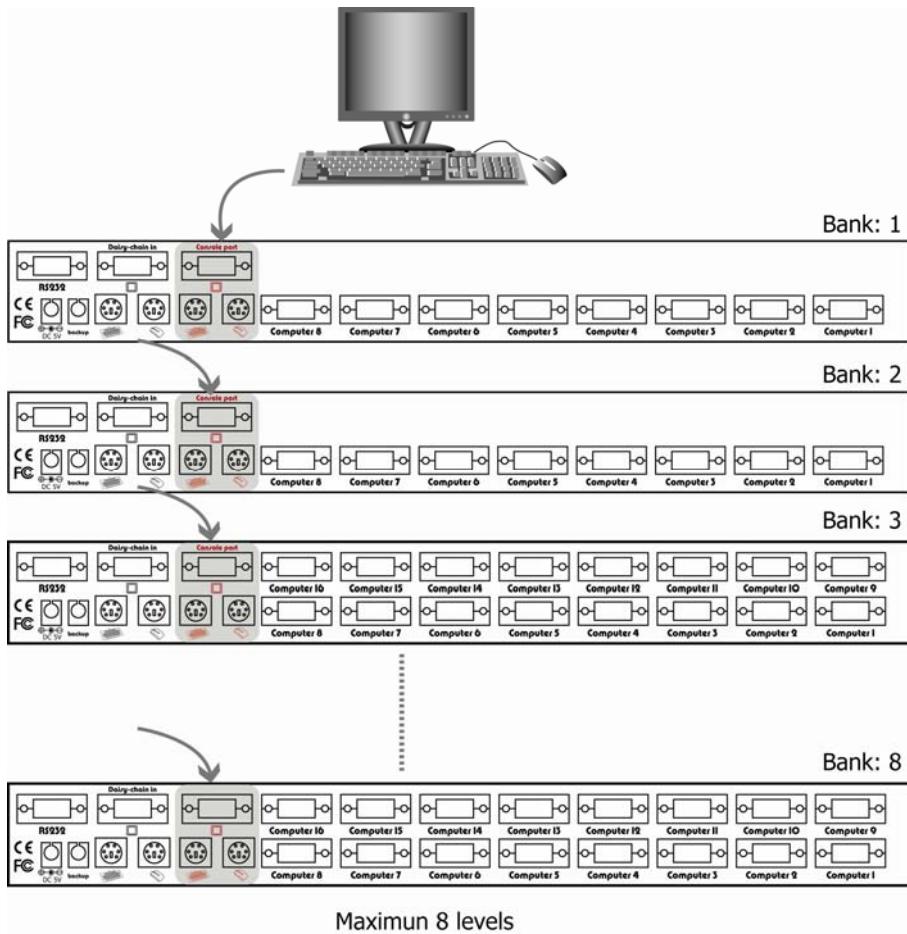
## Step 7

When above cable installation is complete, please re-check all cable is securely fastened at correct socket. Recommend attach label for identification.

## Step 8 Daisy Chain (optional)

If daisy chaining is needed please use the daisy chain cable included with package.

★ NOTE: Please do not use other type of cable for daisy chaining PS2 KVMs.



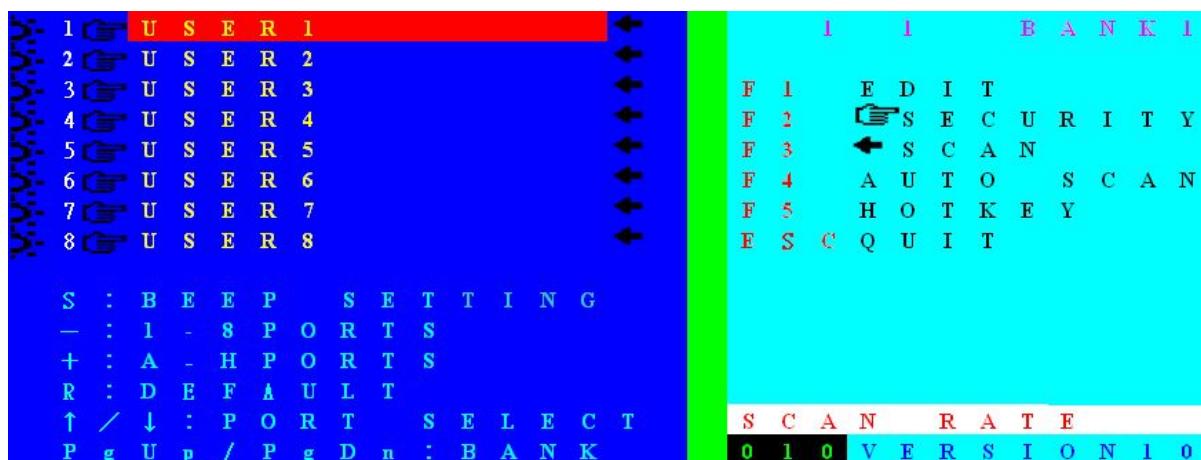
## 5. Operation & Usage

5.1 At factory default the PS2 KVM will not ask for password unless it is set by user. You may press “**Scroll Lock**” twice followed by “**F2**” to bring up password setting menu.

★ NOTE : Before you are familiarized with this device, it is strongly recommended to use without password. If password is forgotten, please send PS2 KVM to your distributor for factory reset.

5.2 To switch port, you may enter OSD menu to select port, or, use Hot-Key to perform switching. To bring up OSD menu, please press “**Scroll Lock**” twice to activate OSD Main Menu as illustrated below<fig.1>.

### OSD Main Menu



<fig.1>

### 5.3 OSD Main Screen Headings

	indicates the computer is powered on at selected port
	indicates the computer attached at this port has password protected. All ports at factory default do not have password assigned, therefore no icon present
<b>USER1~8</b>	Port name of corresponding port number. USER 1~8 illustrated as factory default setting.
	indicates the PC port is set for Auto Scan Mode. At factory default all PC port is active for Auto Scan.

<b>S</b>	Every time switching is made PS2 KVM beeps for notification. Please press Scroll Lock twice followed by "S" to turn beeper on or off
—	to select 1~8 computer Ports (1~8 PC Port)
+	to select A~H computer port (9~16 PC Port)
<b>R</b>	to set factory default. ( ★NOTE: password will not be erased after this operation)
↑	Select computer at previous port
↓	Select computer at next port
PgUp	Select previous bank
PgDn	Select next bank
1 1	Left hand side "1" indicates current active port, right hand side "1" indicates current active bank.
F1	Edit computer name
F2	Password setting
F3	Select scan port
F4	Auto scan mode
F5	Hot key setting
ESC	Exit OSD
SCAN RATE	Scan rate
VERSION	Firmware version

5.3.1 Use right hand side of OSD commands for adjust settings

Function keys: **F1, F2, F3, F4, F5, ESC and → left arrow key**

First row on right hand window - 1,1,Bank1 : indicates currently PS2 KVM active at Bank 1, computer port 1.

SCAN RATE set at 10 second

Firmware version now at version 1.0

#### **F1 Edit computer name (EDIT)**

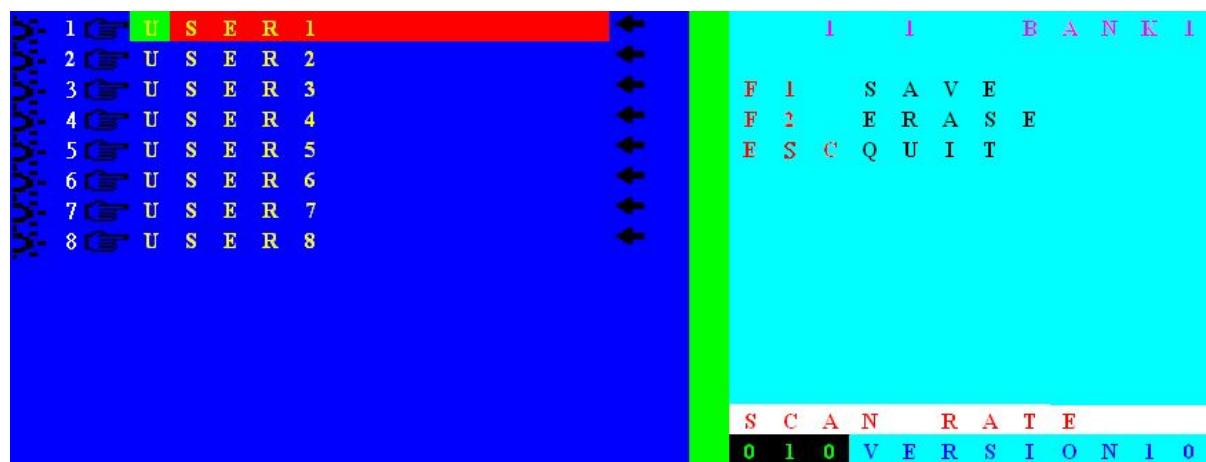
**On the OSD menu, please press F1 to edit PC port name as illustrated below <fig.2>.**

Now please use the secondary function key to **F1(SAVE)**,

**F2(ERASE), or ESC(QUIT)**

- Edit the desirable name at cursor position, maximum 12 characters.
- F1- Save port name settings and brings back to OSD main menu
- F2- Erase all texts. To erase individual character, please use Backspace (←)
- ESC to exit EDIT menu

#### **Edit PC port name menu**



<fig.2>

## F2- Password setting (SECURITY)

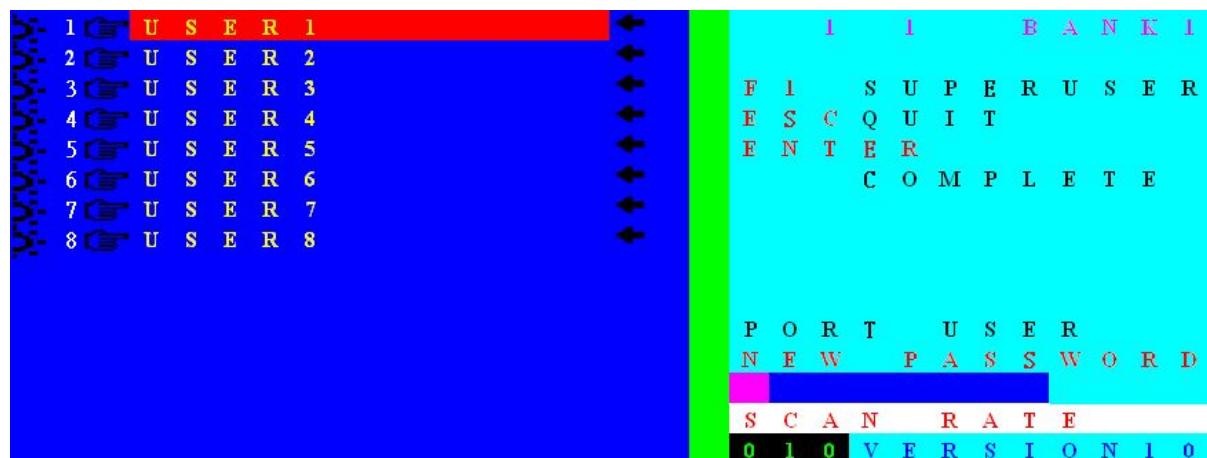
Press F2 at OSD main menu to activate password setting (  SECURITY). Password setting menu for "PORT USER" pops up as illustrated below <fig.3>.

In this screen you may use the secondary OSD function keys:

**F1(SUPERUSER), ESC(QUIT), ENTER(Complete).**

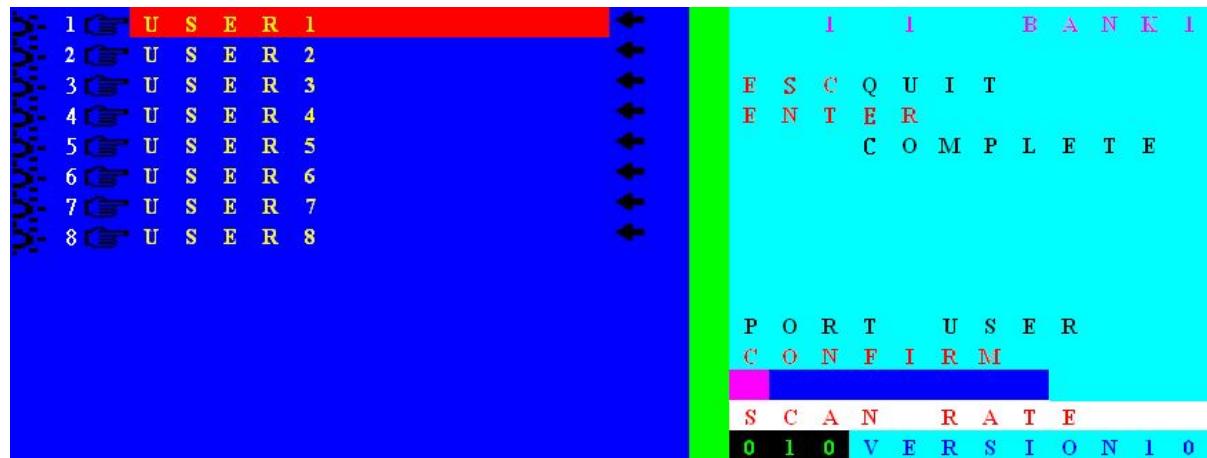
- **F1**- To set password please press F1(SUPERUSER) to set SUPERUSER password <fig.5>  
No password for SUPERUSER is set at factory default. Please enter password of maximum 8 characters. To remove SUPERUSER password, press ENTER at "New Password" field.
- **ENTER**- Press ENTER to complete settings
- **ESC**- When setting is finished, press ESC return to OSD main menu.

### Set PC Port Password :



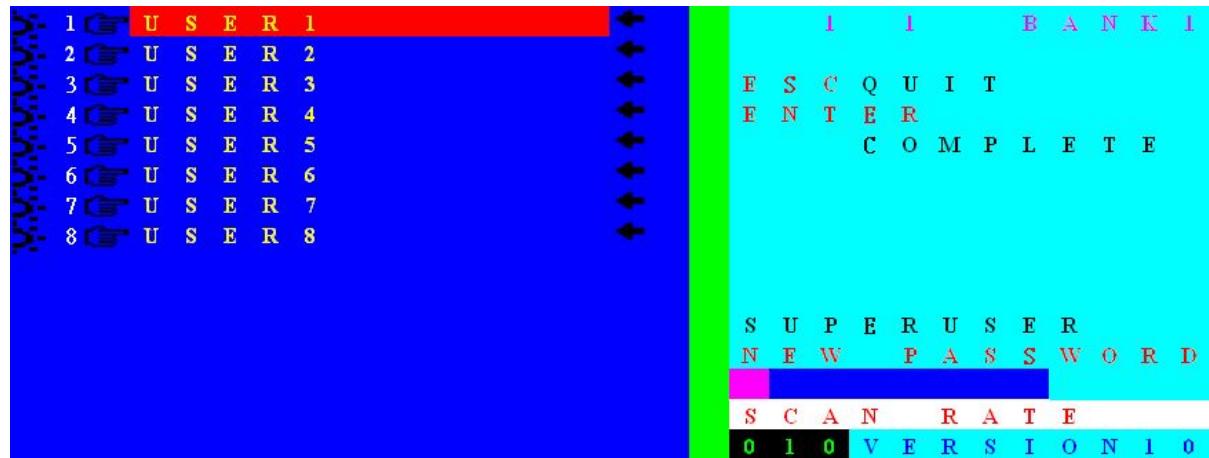
<fig.3>

### Retype your password for verification (CONFIRM) :



<fig.4>

## Set Super User Password



<fig.5>

### **PC port without Password** illustrated below <fig.6>:



1 1 USER 1

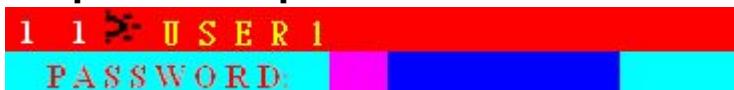
<fig.6>

At factory default, no password is set for PS2 KVM Switch as illustrated

above. Selected PC port is powered on with indication.

To setup password please open OSD, select SECURITY. Please refer to <fig.3> and <fig.4>

### **PC port with password** illustrated below <fig.7>:



1 1 USER 1  
PASSWORD:

<fig.7>

Password request OSD appears for Port-1 computer with powered on status.

Enter password directly. Password allowable length at 1 to 8 characters only (8 characters max). Press ENTER after password input to commence operation for this PC.

### **SUPERUSER PASSWORD** illustrated below <fig.8>:



PASSWORD:

<fig.8>

If SUPERUSER password is set, PS2 KVM Switch will ask for password when KVM is powered on or at RESET. Please enter password follow by ENTER key to continue operation.

## **F3- SELECT SCAN PORT**

Press F3 at OSD main menu to select Auto Scan active port. If a port is selected for Auto Scan, a icon appears, press F3 again, the icon will disappear.

## **F4- AUTO SCAN**

Press F4 at OSD main menu to enter Auto Scan function menu as illustrated below <fig.9>. The secondary function keys are F1, F2 and F3

- F1- To start complete scanning, please press F1 (BROADCAST). All ports will be scanned regardless whether the port is connected with

active computer. The scanning process will be stopped when ESC is pressed. As scan terminates, KVM switch maintains at last scanned PC port OSD.

- F2- To start scanning powered on PC only, please press F2 (POWERED ON PC). To stop scanning, please press ESC button. As scan terminates, KVM switch maintains at last scanned PC port OSD.
- F3- To scan selected PC, please press F3 (SCAN SELECT PC) to commence scanning. To stop scanning, please press ESC button. As scan terminates, KVM switch maintains at last scanned PC port OSD.
- ESC- Press ESC to Exit the Auto Scan menu.

## AUTO SCAN



<fig. 9>

## F5- HOT-KEY

At OSD main menu, please press F5 to enter HOT-KEY setting menu <fig.10>. In the HOT KEY setting menu, secondary selection keys are F1, F2, F3, ENTER.

- Press **F1** to select Scroll Lock as Hot-key
- Press **F2** to select Num Lock as Hot-key
- Press **F3** to select Caps Lock as Hot-key
- Press **ENTER** to save setting and exit the Hot-key setting menu

## Hot Key



<fig.10>

#### → OSD RATE / SCAN RATE SETTING →

To set scan rate please press → button to enter Scan Rate/OSD Rate setting menu as illustrated below <fig.11>. The secondary menu functions are F1 and ENTER button

#### SCAN RATE SETTING

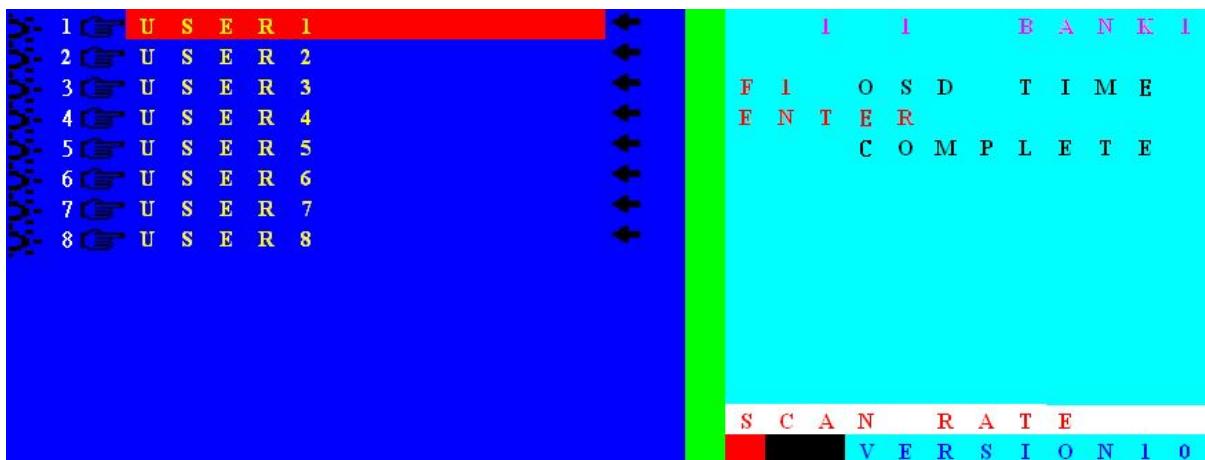
. Please note that scan rate is set 10 seconds at factory default. Please enter desirable time interval (5~255 seconds) in the cursor and press ENTER to confirm setting.

#### OSD RATE SETTING

- Press F1 to enter OSD TIME setting screen <fig.12>. Please enter OSD RATE at bottom right corner (005~255 seconds).
- Press ENTER to complete setting (005~255 seconds) and returns to OSD main menu.
- Please press ESC to clear OSD display if OSD Time is not set. When OSD Time is set, please wait until setting time terminates. Note that ESC button OSD cancellation cannot be used when OSD Time is set.

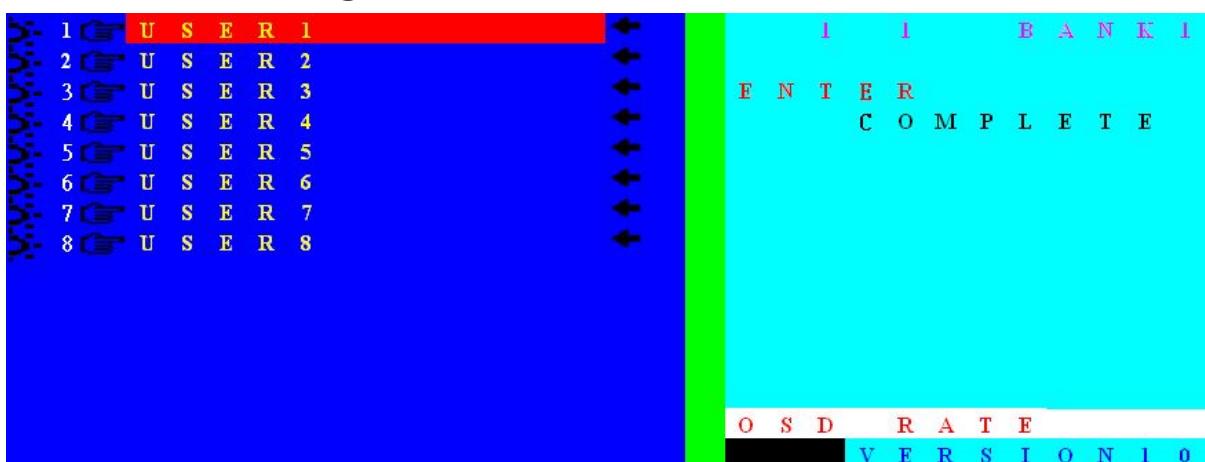
NOTE: When entering OSD RATE and SCAN RATE please enter complete three digits. For example, to enter 5 seconds, please input 005; to enter 10 seconds, please input 010.

#### Main OSD scan rate setting menu



<fig.11>

### OSD time setting menu



<fig.12>

## ***6. Upgrade firmware***

This PS2 KVM Switch has built in ability to upgrade firmware. Whenever upgrading is desirable, the device can be easily upgraded without purchasing new hardware to suit the new environment.

A CD ROM software package is included with the package. Please execute BSETUP.EXE to obtain the new firmware file. Upgrading is done through RS-232 connection to PS2 KVM to complete the process.

Updating procedure:

- 6.1 Please connect the RS-232 cable included with the PS2 KVM package connect with a computer with BSETUP.EXE file and PS2 KVM.
- 6.2 Power on all connecting devices and execute BSETUP.EXE file. When running BSETUP.EXE, you will see the following image:

*<instruction illustration yet to be inserted>*

## ***Troubleshooting***

The following guide is intended to assist users to solve possible issues from operating or installing PS2 KVM.

- i. After hardware installation, please affix label to all cable to assist in future maintenance.
- ii. The maximum KVM cable distance is approximately 100 inches when high quality cable is used.
- iii. The PS2 KVM is implemented with dual power design to collaborate with dual powered server system. The power input with "back up" label is optional. If second power source is required please contact your distributor to purchase additional power adaptor.
- iv. PS2 KVM uses standard polarity power adaptors (tip negative/barrel positive)
- v. As computer booting up please do not perform switching (push button or hot-key operation) to prevent unforeseen situation.
- vi. If keyboard or mouse is not operating, please try to connect keyboard or mouse directly to the computer without PS2 KVM. Please check if keyboard or mouse is working properly.

## ***8. Optional Accessories***

### **A. USB to PS2 Converter**

To connect keyboard and mouse from PC, iMAC, Sun Microsystem with USB interface to PS2 KVM, please use USB PS2 converter.

### **B. KVM CAT5 Extender**

The maximum distance between PS2 KVM and computers is 100". To extend beyond this distance please use a KVM Cat5 Extender.

